Re: Sprinkler valve solenoid amps?

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- *From*: "ampdoc" <ampdoc@xxxxxxxxxxx>

- *Date*: Thu, 24 Aug 2006 18:54:18 −0500

"Dallas" <Cybnorm@xxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:LtqHg.13500$xp2.3309@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

> I've got a real head scratcher.
>
> Long story short: 18 zone, 24−volt AC commercial sprinkler controller system.
>
> One valve on the system won't operate anymore after running fine for years.
>
> The valve operates when connected to a battery operated testing unit.
>
> Voltage at the controller terminal going out to the zone shows 29 volts.
>
> The wires from the controller at the valve (guessing 200+ foot underground run, 14 gauge wire) show 27.4 volts.
>
> There's enough current to give you a tickle if you grab the wires.
>
> Connect the 27.4 volts to the valve and nothing happens.

> My degree was in Business so I start to get fuzzy at this point. Could one of the wires be missing some insulation somewhere underground and drawing off enough amperage to keep the solenoid from actuating while still showing 27.4 volts?
>
> Is there anything that could happen to a solenoid coil that could make it demand more current to operate?
>
> Sadly my $30 meter doesn't have an amperage function. Would hooking the voltmeter in series with the circuit tell me anything?
>
> Can anyone give me a clue as to what's going on?
>
> Dallas

Loading. You are testing the wire in a no−load condition.

A nick in the wire somewhere allowing water to enter could have caused corrosion, and made a resistor of your wire. When you check the end of it, even with your finger, you have not applied a load to the line. Try measuring the voltage at the valve when the wires are connected. I bet you will find that due to resistance in the wire, you have too much voltage drop for the valve to work.

If so, your best option is to replace the wire.

Jammy

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